

Computer Networks 2021 Final Project - Report

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In this project we are required to develop a message system with functions including sending texts, files, and images (with preview feature) to clients, the client then will be able to open the chat box on the browser directly. For our message system, we implemented a client-server protocol through socket programming. The system was built in the macOS environment.

For the setup, first you need to type `make client && make server` command, then install Yarn. Yarn is a package manager that can be used as a project manager. We recommend installing it through the npm package manager: `npm install yarn -g`

Then execute both server and client using `./server [port number]`

Afterwards, simply type the command `yarn starts` to open <http://localhost:3000> for viewing it on the browser.

We know that every function has its unique end point. After you login into your account, the server will give a token to the client. Using this token, the server will recognize you, so when you refresh, you will not get logged out. Then you can give 'command' to, for example, send a text "abc" to another user. The server then will receive the 'send text end point', and save it to the database. To see the "abc" text, the user has to fetch it from the database. To handle multiple client, we use multiplexing (continuation from Phase 1)

Work Division:

Browser development + Report : 蕭恩慈

Client & Server development : 蔡昊辰

Demo: <https://youtu.be/TokPR6p7Xdo>